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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Mon Jul 30 14:06:26 EDT 2007

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Reviewer Comments:

<150> US 60/134,870

<151> 1999 05 19

<150> US 60/133,296

<151> 1999 05 10

<150> US 60/103,514

<151> 1998 10 08

<150> US 60/094,291

<151> 1998 07 27

<150> PCT/USUS99/16596

<151> 1999 07 22

The above non-ASCII characters ("squares") between dates appear throughout the submitted sequence listing file; they also appear in <222> responses which indicate locations within the sequence. Please replace them with hyphens.

<400> 293

His His His His

1

69

Please remove the above "69" appearing at the end of the submitted file.

* * * * *

Application No: 09380447 Version No: 3.0

Input Set:**Output Set:**

Started: 2007-07-19 18:29:54.051
Finished: 2007-07-19 18:31:26.799
Elapsed: 0 hr(s) 1 min(s) 32 sec(s) 748 ms
Total Warnings: 284
Total Errors: 366
No. of SeqIDs Defined: 292
Actual SeqID Count: 293

Error code	Error Description
E 287	Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <141>
E 287	Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>
E 287	Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>
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E 287	Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
E 341	'Xaa' position not defined SEQID (1) POS (12)
E 341	'Xaa' position not defined SEQID (1) POS (13)
E 341	'Xaa' position not defined SEQID (1) POS (14)
E 341	'Xaa' position not defined SEQID (1) POS (15)
E 341	'Xaa' position not defined SEQID (1) POS (16)
E 341	'Xaa' position not defined SEQID (1) POS (17)
E 341	'Xaa' position not defined SEQID (1) POS (18)
E 341	'Xaa' position not defined SEQID (1) POS (19)
E 341	'Xaa' position not defined SEQID (1) POS (20)
E 341	'Xaa' position not defined SEQID (1) POS (21)
E 341	'Xaa' position not defined SEQID (1) POS (22)
E 341	'Xaa' position not defined SEQID (1) POS (23)
E 341	'Xaa' position not defined SEQID (1) POS (24)

Input Set:

Output Set:

Started: 2007-07-19 18:29:54.051
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Elapsed: 0 hr(s) 1 min(s) 32 sec(s) 748 ms
Total Warnings: 284
Total Errors: 366
No. of SeqIDs Defined: 292
Actual SeqID Count: 293

Error code	Error Description
E 341	'Xaa' position not defined SEQID (1) POS (25)
E 341	'Xaa' position not defined SEQID (1) POS (26)
E 341	'Xaa' position not defined SEQID (1) POS (27)
E 341	'Xaa' position not defined SEQID (1) POS (28)
E 341	'Xaa' position not defined SEQID (1) POS (29)
E 341	'Xaa' position not defined SEQID (1) POS (30)
E 257	Invalid sequence data feature in <221> in SEQ ID (2)
E 257	Invalid sequence data feature in <221> in SEQ ID (3)
E 257	Invalid sequence data feature in <221> in SEQ ID (4)
E 257	Invalid sequence data feature in <221> in SEQ ID (5)
E 257	Invalid sequence data feature in <221> in SEQ ID (6)
E 257	Invalid sequence data feature in <221> in SEQ ID (7)
E 257	Invalid sequence data feature in <221> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)

Input Set:

Output Set:

Started: 2007-07-19 18:29:54.051
Finished: 2007-07-19 18:31:26.799
Elapsed: 0 hr(s) 1 min(s) 32 sec(s) 748 ms
Total Warnings: 284
Total Errors: 366
No. of SeqIDs Defined: 292
Actual SeqID Count: 293

Error code	Error Description
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W 213	Artificial or Unknown found in <213> in SEQ ID (20)
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E 342	'n' position not defined found at POS: 22 SEQID(21)
E 342	'n' position not defined found at POS: 26 SEQID(21)
E 342	'n' position not defined found at POS: 28 SEQID(21)
E 342	'n' position not defined found at POS: 31 SEQID(21)
E 342	'n' position not defined found at POS: 34 SEQID(21)
E 342	'n' position not defined found at POS: 38 SEQID(21)
E 342	'n' position not defined found at POS: 41 SEQID(21)
E 342	'n' position not defined found at POS: 44 SEQID(21)
E 342	'n' position not defined found at POS: 47 SEQID(21)
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E 342	'n' position not defined found at POS: 22 SEQID(22)
E 342	'n' position not defined found at POS: 26 SEQID(22)
E 342	'n' position not defined found at POS: 28 SEQID(22)
E 342	'n' position not defined found at POS: 31 SEQID(22)
E 342	'n' position not defined found at POS: 35 SEQID(22)
E 342	'n' position not defined found at POS: 38 SEQID(22)

Input Set:

Output Set:

Started: 2007-07-19 18:29:54.051
Finished: 2007-07-19 18:31:26.799
Elapsed: 0 hr(s) 1 min(s) 32 sec(s) 748 ms
Total Warnings: 284
Total Errors: 366
No. of SeqIDs Defined: 292
Actual SeqID Count: 293

Error code	Error Description
E 342	'n' position not defined found at POS: 41 SEQID(22)
E 342	'n' position not defined found at POS: 44 SEQID(22)
E 342	'n' position not defined found at POS: 46 SEQID(22) This error has occurred more than 20 times, will not be displayed
W 213	Artificial or Unknown found in <213> in SEQ ID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (24)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)
W 213	Artificial or Unknown found in <213> in SEQ ID (27) This error has occurred more than 20 times, will not be displayed
E 257	Invalid sequence data feature in <221> in SEQ ID (36)
E 257	Invalid sequence data feature in <221> in SEQ ID (56)
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (293)
E 252	Calc# of Seq. differs from actual; 292 seqIds defined; count=293

Sequence Listing

<110> Sidhu, Sachdev S.
 Weiss, Gregory A.
 Wells, James A.

<120> TRANSFORMATION EFFICIENCY IN PHAGE DISPLAY THROUGH MODIFICATION OF A
 COAT PROTEIN

<130> 11669.141USWO

<140> 09380447
 <141> 1999-09-01

<150> US 09/380,447
 <151> 1999 09 01

<150> US 60/134,870
 <151> 1999 05 19

<150> US 60/133,296
 <151> 1999 05 10

<150> US 60/103,514
 <151> 1998 10 08

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 <151> 1998 07 27

<150> PCT/USUS99/16596
 <151> 1999 07 22

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 <213> Artificial sequence

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 <222> 12 30
 <223> unknown amino acid

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 1 5 10 15
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Glu Thr Ala Ser Ala Gln Leu Ser Asn Phe Ala Ala Lys Ala Pro
 35 40 45

Asp Asp Gly Glu Ala
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<213> M13 phage

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<221> M13 phage

<222> 1 50

<223> coat protein VIII

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20 25 30

Val Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe
35 40 45

Thr Ser Lys Ala Ser
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<210> 3

<211> 50

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<213> f1 phage

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<221> f1 phage

<222> 1 50

<223> coat protein VIII

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Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asp Ser Leu Gln
1 5 10 15

Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val
20 25 30

Val Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe
35 40 45

Thr Ser Lys Ala Ser
50

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<211> 50

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<222> 1 50

<223> coat protein VIII

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1				5					10				15	

Ala	Ser	Ala	Thr	Glu	Tyr	Ile	Gly	Tyr	Ala	Trp	Ala	Met	Val	Val
			20					25					30	

Val	Ile	Val	Gly	Ala	Thr	Ile	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe
			35					40					45	

Thr	Ser	Lys	Ala	Ser
			50	

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<211> 50

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<213> Zj 2 phage

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<222> 1 50

<223> coat protein VIII

<400> 5

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Ala	Ser	Ala	Thr	Glu	Tyr	Ile	Gly	Tyr	Ala	Trp	Ala	Met	Val	Val
			20					25					30	

Val	Ile	Val	Gly	Ala	Thr	Ile	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe
			35					40					45	

Ala	Ser	Lys	Ala	Ser
			50	

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<211> 50

<212> PRT

<213> Ifl phage

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<221> Ifl phage

<222> 1 50

<223> coat protein VIII

<400> 6

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Ala	Gln	Ala	Thr	Glu	Met	Ser	Gly	Tyr	Ala	Trp	Ala	Leu	Val	Val
			20					25					30	

Leu Val Val Gly Ala Thr Val Gly Ile Lys Leu Phe Lys Lys Phe
35 40 45

Val Ser Arg Ala Ser
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<211> 50
<212> PRT
<213> I2 2 phage

<220>
<221> I2 2 phage
<222> 1 50
<223> coat protein VIII

<400> 7
Ser Thr Ala Thr Ser Tyr Ala Thr Glu Ala Met Asn Ser Leu Lys
1 5 10 15

Thr Gln Ala Thr Asp Leu Ile Asp Gln Thr Trp Pro Val Val Thr
20 25 30

Ser Val Ala Val Ala Gly Leu Ala Ile Arg Leu Phe Lys Lys Phe
35 40 45

Ser Ser Lys Ala Val
50

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<211> 50
<212> PRT
<213> Ike phage

<220>
<221> Ike phage
<222> 1 50
<223> coat protein VIII

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Asn Ala Ala Thr Asn Tyr Ala Thr Glu Ala Met Asp Ser Leu Lys
1 5 10 15

Thr Gln Ala Ile Asp Leu Ile Ser Gln Thr Trp Pro Val Val Thr
20 25 30

Thr Val Val Val Ala Gly Leu Val Ile Arg Leu Phe Lys Lys Phe
35 40 45

Ser Ser Lys Ala Val
50

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<213> Artificial sequence

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<223> oligonucleotide primer

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aaaagaattc ccgacaccat cgaatggtgc 30

<210> 10

<211> 35

<212> DNA

<213> Artificial sequence

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<210> 11

<211> 56

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<213> Artificial sequence

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<223> oligonucleotide primer

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atcgtc 56

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<211> 34

<212> DNA

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<223> oligonucleotide primer

<400> 12

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<211> 61

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aggtgtcgtg g 61

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<210> 17
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caagcctcag cgaccgaatg atgaggttat gcgtgggcga tg 42

<210> 19
<211> 42

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cgctgggcga tgggtggttg atgagtcggc gcaactatcg gt 42

<210> 20
<211> 42
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<210> 21
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taactccctg caagcc 66

<210> 22
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<220>
<221> unsure
<222> 19, 22, 26, 28, 31, 35, 38, 41, 44, 46
<223> unknown base

<400> 22
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tatcggttat gcgtgg 66

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<223> unknown base

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tcattgtcgg cgcaactatc 70

<210> 24
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<222> 19, 22, 25, 28, 31, 34, 37 38, 40 41, 43 44
<223> unknown base

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gtttaagaaa ttcacc 66

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<211> 72
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<223> unknown base

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<400> 26

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<211> 36

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<210> 28

<211> 36

<212> DNA

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<223> mutagenic oligonucleotide

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<210> 29

<211> 75

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attcctggct atcgtgcagt gccgc 75

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<211> 57

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ccgctct 57

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<211> 46

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Ser	Val	Asp	Val	Asp	Asn	Asn	Trp	Ile	Trp	Ala	Val	Gly	Ile	Ile
				20					25					30

Tyr	Met	Leu	Leu	Val	Glu	Ala	Ser	Pro	Trp	Ala	Ala	Lys	Ala	Pro
				35					40					45

Asp	Asp	Gly	Glu	Ala
				50

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<223> oligonucleotide linker library

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cvvcvvcvvc vvcvvcvvcg gcgggtgccga ggggtgacgat ccc 93

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c 51

<210> 36
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ggtgacgatc cc 112

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cattgtcggc gcaact 66

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<223> mutagenic oligonucleotide

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<210> 44

<211> 33

<212> DNA

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<210> 45

<211> 66

<212> DNA

<213> Artificial sequence

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<223> mutagenic oligonucleotide

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tatcggttat gcgtgg 66

<210> 46

<211> 66

<212> DNA

<213> Artificial sequence

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<400> 46

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cgagggtgac gatecc 66

<210> 47

<211> 60

<212> DNA

<213> Artificial sequence

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<223> mutagenic oligonucleotide

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cggttatgcg 60

<210> 48

<211> 66

<212> DNA
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cattgtcggc gcaact 66

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<210> 50
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<212> DNA
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<220>
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<211> 33

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<210> 53

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<210> 55
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